

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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*Ex parte* CIPRIANO A. SANTOS, DIRK M. BEYER, TROY SHAHOUMIAN,  
BILAL IQBAL, HARLAN CROWDER and VINEET SINGH

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**MAILED**

OCT 12 2006

U.S. PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Appeal No. 2006-1817  
Application No. 09/851,514  
Technology Center 3600

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**ON BRIEF**

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Before LINCK, HORNER and FETTING, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

**DECISION ON APPEAL**

This is a decision on appeal under 35 U.S.C. § 134(a) from the examiner's final rejection of claims 1, 2, and 4-20, all of the claims pending in the application. Claim 3 has been canceled.

We affirm.

## BACKGROUND

The appellants' invention relates to a computer-implemented method and system to define a campaign plan having differential allocations of promotions among prospective customers of a business enterprise. Independent claim 1 is representative of the subject matter on appeal. It reads:

1. A computer implemented method of determining differential promotion allocation among prospective customers comprising the steps of:

entering, into a computer, management information that is specific to business management objectives and constraints, including entering budget information; and

defining, with the computer, a campaign plan for allocating presentations of a plurality of said promotions among said customers, including using automated processing to form said campaign plan on the basis of customer segments and said management information, said customer segments being based upon customer commonalities with respect to at least one customer attribute, said campaign plan being defined to automatically detecting [*sic*] contradictions between said constraints and other aspects of said entered management information, automatically identifying resolutions to said contradictions, and implementing said resolutions in said campaign plan.

The examiner relies upon the following as evidence of unpatentability:

Harhen	5,406,477	Apr. 11, 1995
Gerace	5,848,396	Dec. 08, 1998
Deaton <i>et al.</i> (Deaton)	5,687,322	Nov. 11, 1997

The appellants seek our review of the examiner's rejection of claims 1, 2, and 4-20 under 35 U.S.C. § 103(a) as being unpatentable over Gerace in view of Harhen in view of Deaton.

Rather than reiterate in detail the conflicting viewpoints advanced by the examiner and the appellants regarding this appeal, we make reference to the

examiner's answer (mailed January 23, 2006) for the examiner's complete reasoning in support of the rejection and to the appellants' brief (filed December 26, 2005) and reply brief (filed March 14, 2006) for the appellants' arguments.

## OPINION

In reaching our decision in this appeal, we have carefully considered the appellants' specification and claims, the applied prior art, and the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations that follow.

### I. *Independent Claim 1*

In the rejection of independent claim 1, the examiner determined that Gerace discloses a computer-implemented method of determining differential promotion allocation among prospective customers containing all of the elements of claim 1, except that Gerace does not explicitly disclose target profit levels or target revenue levels or automatically detecting contradictions between business constraints and other aspects of the entered management information. (Examiner's Answer, pp. 4-7.)

The examiner relies on Deaton for the teaching of target profit levels or target revenue levels. (Examiner's Answer, p. 6.) The examiner relies on Harhen for the teaching of automatically detecting inconsistencies and contradictions between the business constraints and other aspects of the entered management information, automatically identifying resolutions to the inconsistencies and contradictions, and implementing the resolutions in a campaign plan. (Examiner's

Answer, p. 7.) The examiner concludes:

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Harhen's further analysis and optimization of business and marketing objectives with inconsistency resolution to Gerace's optimization of marketing objectives. One would have been motivated to do this in order to provide more advanced modeling and, therefore, better optimization to Gerace's optimization.

(Examiner's Answer, p. 7.)

The appellants present three arguments for patentability of claim 1. First, the appellants contend that the examiner has failed to establish a prima facie case of obviousness, because the prior art does not teach or suggest the recitation in claim 1, *i.e.*, "said campaign plan being defined to **automatically detecting contradictions** between said constraints and other aspects of said entered management information, **automatically identifying resolutions** to said contradictions, and implementing resolutions in said campaign plan." (Claim 1, quoted in Appellants' Brief, p. 8.)

Second, the appellants contend that the examiner has failed to establish a prima facie case of obviousness, because the prior art fails to provide any suggestion or motivation to modify or combine Gerace and Harhen. (Appellants' Brief, p. 12.) The appellants argue that Gerace and Harhen are "directed to solving completely different problems" and that the examiner has failed to provide objective evidence of the requisite motivation or suggestion to combine or modify the cited references. (Appellants' Brief, pp. 12-13.)

Third, the appellants contend that the examiner has failed to establish a prima facie case of obviousness, because new elements and significant substitutions would have to be made to Gerace and/or Harhen to arrive at the claimed recitations, and “this combination would not yield a reasonable expectation of success for automatically detecting contradictions of management information, automatically identifying resolutions to the contradictions, and implementing the resolutions in the campaign plan.” (Appellants’ Brief, p. 14.)<sup>1</sup>

## *II. Graham Factors*

To determine whether a prima facie case of obviousness has been established, we are guided by the factors set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966), *viz.*, (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the art.<sup>2</sup>

### *A. Scope and content of the prior art*

Gerace relates generally to a computer-implemented method and system that determines allocation of promotions among prospective customers and then displays targeted advertising and promotions<sup>3</sup> to the customer based on the

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<sup>1</sup> Appellants provide no evidence in support of their contention of a lack of reasonable expectation of success. We find that the marketing campaign planning computer implementation field is a predictable art, and we see no basis for lacking a reasonable expectation of success absent some evidentiary showing by the appellants.

<sup>2</sup> Although *Graham* also suggests analysis of secondary considerations such as commercial success, long felt but unsolved needs, failure of others, etc., the appellants presented no such evidence of secondary considerations for the Board’s consideration.

<sup>3</sup> Although our discussion of Gerace focuses mainly on advertising, which is a form of

customer's habits and/or preferences (a user's "psychographic profile") and based on the customer's demographic information. (Gerace, col. 2, lines 24-34.) We find that it is implicit in the implementation of the system and method of Gerace that when the ad sponsor makes purchasing decisions about an advertising package (Gerace, col. 12, lines 11-17), the sponsor would need to resolve contradictions between its business constraints and business objectives (e.g., the sponsor's objective is to have 1,000 hits and click throughs, but the sponsor's budget will allow the sponsor to purchase the ad package that has only 500 hits and click throughs). We find, however, that Gerace does not teach an automated system for detecting and resolving these contradictions to implement a campaign plan.

The examiner relies on Harhen for the teaching of an automated system for detecting and resolving contradictions. (Examiner's Answer, p. 7.) Harhen relates generally to the field of decision support tools and includes an exemplary embodiment of such a tool for creating a realistic model of an enterprise to use in strategic planning. (Harhen, col. 1, lines 11-14.) We find that Harhen discloses that the tool has "a wide range of uses outside the domain of strategic planning" such as "[w]herever multiple analytical methods can be applied to a system to evaluate a component of the system." (Harhen, col. 6, lines 63-68.) We agree with the examiner that Harhen's system automatically detects contradictions between business constraints and objectives, and automatically identifies and implements resolutions in its strategic planning. (Examiner's Answer, p. 7, see also pp. 12-17.)

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promotion, Gerace also teaches using his system and method for displaying incentive promotions. (See Gerace, col. 9, lines 8-12 (system displays promotional travel specials advertised in areas of interest to the user based on the user's profile)).

In particular, as found by the examiner, the tool of Harhen makes projections about the business enterprise based on many factors by applying multiple reasoning methods. (Harhen, col. 4, lines 50-54.) “The process starts when the user asks the system to solve a problem. The typical question is to determine the behavior of a variable in the future.” (Harhen, col. 5, lines 52-55.) The tool performs variable projections by applying multiple reasoning methods. (Harhen, col. 5, lines 21-24.) Applying different reasoning methods gives rise to the need for reconciliation rules (choosing between competing evidence based on its plausibility). (Harhen, col. 5, lines 21-32.) A problem tree, representing the path to the final hypothesis, is constructed as the search for a solution proceeds. (Harhen, col. 6, lines 33-37.) “The reconciliation rules prune the search tree by eliminating inferior hypotheses.” (Harhen, col. 6, lines 7-12.) Harhen’s tool documents both the evidence that it has adopted and also “those reasoning methods and conclusions that it has decided to ignore” so as to “facilitate[ ] explanation of the solution path created.” (Harhen, col. 5, lines 37-49 and Examiner’s Answer, pp. 15-17.)

With regard to the Deaton reference, the appellants do not challenge the examiner’s findings as to its teachings. As such, we sustain the examiner’s findings as to the scope and content of Deaton.

In addition to the prior art relied upon by the examiner, the appellants admit “[m]ethods of designing customer-specific promotion campaign plans are known,” and “the typical goal of a promotion campaign plan is to increase the conversion rate in a cost-efficient manner.” (Specification (Background Art), p. 1, lines 37-38 and page 2, lines 1-2.) The appellants also recognize that a prior art system, sold under the trademark MARKETSWITCH TRUE OPTIMIZATION, uses a

mathematical methodology to form “a promotion campaign plan” that optimizes the plan by allocating “finite marketing resources across various channels . . . in view of different business constraints and marketing scenarios, with a goal of targeting the right customer with the right product through the right channel.”<sup>4</sup> (Specification (Background Art), page 2, lines 18-26.)

*B. Differences between the prior art and the claims at issue*

We find that when one is defining a marketing campaign plan, such as taught in Gerace, one must consider budget constraints and business objectives and balance competing factors. We find, however, that the prior art does not explicitly teach a system to *automatically* detect contradictions between business constraints and other management information and *automatically* identify resolutions and implement the resolution in a *marketing campaign* plan. As such, we find that the difference between the prior art teachings and the claimed subject matter is the addition of a variable, consisting of business management information, to a campaign-planning computer program, such as the program taught in Gerace.

*C. Level of ordinary skill in the art*

The person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art. *Custom Accessories, Inc. v. Jeffrey-Allan*

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<sup>4</sup> MarketSwitch obtained U.S. Patent No. 6,993,493 to Galperin *et al.* relating to this system. We note that U.S. Patent No. 6,044,357 to Garg, a prior art patent cited during prosecution of the Galperin patent, appears relevant to the present application. Notably, the object of the invention of Garg is to select a marketing strategy that maximizes a firm’s profits over a planning horizon while maintaining all expenditures on the marketing strategy within a predetermined budget and taking into consideration the business objectives of the Operations division. (See e.g., Garg, col. 4, lines 40-47 and col. 5, lines 48-53). If the appellants pursue further prosecution of this application, the examiner is advised to consider the applicability of the Garg patent.

*Indus., Inc.*, 807 F.2d 955, 962, 1 USPQ2d 1196, 1201 (Fed. Cir. 1986). In determining this skill level, the court may consider various factors including “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Id.*, cited in *In re GPAC*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995). In a given case, every factor may not be present, and one or more factors may predominate. *Id.* at 962-63, 1 USPQ2d at 1201.

We find, based on our examination of the prior art and the state of the art in computer-implemented marketing campaign planning, that the marketing campaign-planning art is a mature field. The art evidences a common usage in the field of many sophisticated campaign-planning techniques based on detailed and complex analyses of consumer behavior. It is also clear from an examination of the prior art that those of ordinary skill in the marketing campaign-planning art have been using computers to implement mathematical analysis methods, such as regression analysis, to define and optimize marketing campaigns. (See e.g., Gerace, col. 13, lines 29-32.) It is also clear from an examination of the prior art that those of ordinary skill in the art have been taking into account budget constraints and business objectives when defining campaign plans. (See e.g., Deaton, col. 73, lines 40-47 and col. 74, line 65-col. 75, line 8.)

### *III. Motivation-Teaching-Suggestion to Combine*

In addition to our review of the *Graham* factors, we also considered the requirement of a showing of a “teaching, suggestion, or motivation” to modify or

combine the prior art teachings. This requirement was recently described in *In re Kahn*, 441 F.2d 977, 78 USPQ2d 1329 (Fed. Cir. 2006):

[T]he “motivation-suggestion-teaching” test asks not merely what the references disclose, but whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims. From this it may be determined whether the overall disclosures, teachings, and suggestions of the prior art, and the level of skill in the art – i.e., the understandings and knowledge of persons having ordinary skill in the art at the time of the invention– support the legal conclusion of obviousness. (internal citations omitted).

*Id.* at 988, 78 USPQ2d at 1337.

“In considering motivation in the obviousness analysis, the problem examined is not the specific problem solved by the invention but the general problem that confronted the inventor before the invention was made.” *Kahn*, 441 F.3d at 988, 78 USPQ2d at 1336 (citations omitted). In this case, the general problem facing the inventor was to develop campaign plans that optimize differential promotion allocation among prospective customers.

To establish a prima facie case of obviousness, the references being combined do not need to explicitly suggest combining their teachings. *See e.g., In re Johnston*, 435 F.3d 1381, 1385, 77 USPQ2d 1788, 1790-91 (Fed. Cir. 2006) (*citing Medical Instrumentation and Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1221-22 (Fed. Cir. 2003)) (“[t]he suggestion or motivation to combine references does not have to be stated expressly; rather it may be shown by reference

to the prior art itself, to the nature of the problem solved by the claimed invention, or to the knowledge of one of ordinary skill in the art.”); and *Kahn*, 441 F.3d at 987-88, 78 USPQ2d at 1337-38 (“the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references”). In fact, an explicit teaching that identifies and selects elements from different sources and states that they should be combined in the same way as in the invention at issue, is rarely found in the prior art. *Johnston*, 435 F.3d at 1385, 77 USPQ2d at 1790-91. As such, we examined whether the prior art explicitly or implicitly suggested the claimed combination. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.”” *Kahn*, 441 F.3d at 987-88, 78 USPQ2d at 1336 (quoting *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000)).

Although there is no explicit teaching in the prior art to combine Gerace, Harhen and Deaton, we find that a suggestion to combine the references is implicit from the prior art as a whole. This implicit suggestion satisfies the requirement for a teaching, suggestion, or motivation for making the necessary modifications to the method of Gerace.

Specifically, we find sufficient motivation to combine the teachings of the prior art, because the prior art Gerace and Deaton systems, which relate to marketing campaign planning and optimization of campaign plans (Examiner’s Answer, pp. 5 and 6), are directly in the field of the appellants’ endeavor, and because the subject matter of the Harhen reference, which is directed to the general field of strategic planning for business enterprises, is in a related field of technology

to that of the claimed subject matter. In particular, marketing campaign planning is a form of strategic planning that is engaged in by business enterprises, and as such, the Harhen reference is in a related field.

We further find that both Gerace and Deaton are directed to solving the same problem as the claimed invention, *viz*, developing campaign plans that optimize differential promotion allocation among prospective customers. (Examiner's Answer, pp. 3 and 6), and the Harhen system is closely analogous to the claimed marketing campaign-planning system. (Examiner's Answer, pp. 13-14). In particular, the teaching of Harhen is directed to a method of solving a projection problem for strategic planning in any business enterprise. Harhen teaches that the method can be used "to determine the behavior of a variable in the future." (Harhen, col. 5, lines 54-55.) Marketing campaign planning is a strategic planning exercise that requires a projection as to how different variables will affect future sales in order to optimize a campaign plan. Thus, the teachings of Harhen would have been reasonably pertinent to the problem with which the appellants were concerned. See *In re Kahn*, 441 F.3d at 986-87, 78 USPQ2d at 1336 (citing *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992)).

We further find that one reasonably skilled in the applicable art would have been aware of the nature of the extensive use of computer-implemented systems in the marketing industry, of the prior art marketing campaign-planning systems of Gerace and Deaton, and of the analogous prior art strategic planning system of Harhen. Based on this awareness, and recognizing that there are differences between the claimed subject matter and the state of the prior art, we hold that the gap between the prior art and the claimed method is simply not so great as to render

the claimed method nonobvious to one reasonably skilled in the art. We hold the claimed method to be an obvious variation on the prior art marketing campaign-planning systems (such as those taught in Gerace and Deaton) based on the strategic planning methodology taught in Harhen.

As such, we agree with the Examiner that a person of ordinary skill in the art at the time of the invention, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to apply the teachings of Harhen and Deaton to the system and method Gerace to make the combination recited in the claims, including automatically detecting contradictions between business constraints and objectives in planning a campaign, automatically identifying resolutions to such contradictions, and implementing the resolutions in the campaign plan in order to provide more advanced modeling and, therefore, better optimization of Gerace's optimization system and method.

With regard to the reasonable expectation of success, we hold that a general teaching in the prior art of using business management objectives and constraints to solve strategic planning problems for a business enterprise, as taught by Harhen, is sufficient without a specific teaching of the precise method steps of how it would be incorporated into the specific marketing campaign planning methodology of Gerace in view of the general understandings and knowledge of persons having ordinary skill in the marketing campaign planning and computer programming arts.

Accordingly, we sustain the examiner's rejection of claim 1.

*IV. Claims 5-8, 10-15, 17, 18 and 20*

The appellants did not separately argue the patentability of these claims. Rather, they grouped these claims together and relied on the arguments of patentability for independent claim 1. (Appellants' Brief, p. 8.) Finding no argument for the separate patentability of these claims, these claims are considered to fall with independent claim 1. As such, because we sustain the examiner's rejection of claim 1, we also sustain the rejection of these claims.

*V. Dependent Claim 2*

With respect to dependent claim 2, the examiner contends that Gerace discloses the steps of "automatically identifying an inconsistency in achieving two of said business management objectives; automatically determining a guideline for resolving a trade-off between said two business objectives; and utilizing said guideline in configuring said campaign plan." (Examiner's Answer, p. 8.) In support of this contention, the examiner points to col. 15, lines 10-15 of Gerace, which describe an equation that is used to rank advertisements determined to be appropriate to a potential customer. The examiner also points to col. 15, lines 29-35 of Gerace, which describes an embodiment in which the computer program automates the weighting of criteria and in real time adjusts the intended audience profile of advertisements using traditional regression analysis of the tracked criteria. (Examiner's Answer, p. 8.)

The examiner noted, "Harhen discloses recognizing inconsistencies, balancing business goals and objectives, and utilizing hierarchies concerning business goals and objectives, utilizing guidelines and making recommendations." (Examiner's Answer, p. 24.) The examiner further found that Harhen teaches that

the method and apparatus of its invention has a wide range of uses outside of strategic planning, including applicability “[w]herever multiple analytical methods can be applied to a system to evaluate a component of the system.” (Examiner’s Answer, p. 27 (emphasis omitted)). As such, the examiner rejected this dependent claim as obvious over Gerace in view of Harhen in view of Deaton.

The appellants argue that claim 2 is separately patentable, because the sections of Gerace cited by the examiner teach “a program that uses an equation to rank advertisements,” and “Gerace never determines **guidelines for resolving a trade-off between the business objectives.**” (Appellants’ Brief, pp. 14-15.) With respect to the examiner’s reliance on the teachings of Harhen, the appellants argue that the teachings relied upon are not applicable for determining how to allocate promotions to prospective purchasers/customers in a marketing campaign. (Appellants’ Reply Brief, p. 4.)

We sustain the examiner’s rejection. Harhen discloses automatically identifying an inconsistency in achieving two business management objectives, automatically determining a guideline for resolving a trade-off between the objectives, and using the guideline in configuring the campaign plan. Specifically, we agree with the examiner, as explained on pages 25-26 of the Answer, that Harhen teaches that a user can create a model of an enterprise by “declar[ing] and instantiat[ing] new objects . . . [and] assign[ing] attributes and values to those objects . . . ” (Harhen, col. 4, lines 63-66.) The method of Harhen provides for “a categorization hierarchy of objects.” (Harhen, col. 5, lines 4-5.) This hierarchy allows Harhen to determine a guideline for resolving a trade-off between the objects

when using the business enterprise model to determine its final hypothesis and projection values for strategic decision making. (Harhen, col. 6, lines 44-56.)

Based on the teaching of Harhen to provide a categorization hierarchy of objects for use in the problem tree to automatically decide in what manner to use the information available in the knowledge base, we find that a person of ordinary skill in the art at the time of the invention, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to apply the teachings of Harhen to the system and method of Gerace in view of Deaton to make the combination recited in claim 2. For the same reasons provided above in our discussion of claim 1, we hold that one of ordinary skill in the art at the time of the invention would have been motivated to combine the art to provide more advanced modeling and, therefore, better optimization of Gerace's optimization system and method.

#### *VI. Dependent Claim 4*

With respect to dependent claim 4, the examiner determined that Gerace teaches providing a report which identifies the contradictions and resolutions. (Examiner's Answer, pp. 8-9.) The examiner further determined that Harhen discloses providing output reports of a final hypothesis, and Deaton discloses providing automatic reports as event-driven activities. (Examiner's Answer, pp. 27-28.) With respect to Harhen, the examiner points specifically to a description of an output report that includes a summary of the evidence that was chosen as the basis for the final hypothesis and includes a problem solution tree containing, among other information, an explanation of the reasoning methods selected and the reasoning methods and solutions discarded. (Harhen, col. 46, lines 9-56.) As such,

the examiner rejected this dependent claim as obvious over Gerace in view of Harhen in view of Deaton.

The appellants argue that Gerace and Harhen do not teach or suggest a report that includes an identification of the contradictions and resolutions. Rather, according to the appellants, the section of Gerace cited by the examiner teaches web-based reporting that includes advertisements and other reports. (Appellants' Brief, p. 15 and Appellants' Reply Brief, p. 4.)

We disagree with the appellants' reading of Harhen. We find that Harhen clearly discloses this feature of the claim, as found by the examiner, in the teaching of an output report that includes information concerning the reasoning methods and solutions discarded (i.e., contradiction) and reasoning methods selected (i.e., resolutions). (Harhen, col. 46, lines 9-56.) As such, we hold that a person of ordinary skill in the art at the time of the invention, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to apply the teachings of Harhen to the system and method Gerace in view of Deaton to make the combination recited in claim 4.

#### *VII. Dependent Claim 9*

With respect to dependent claim 9, the examiner determined that Gerace teaches using null values in testing marketing and targeting projections. (Examiner's Answer, p. 28.) As such, the examiner rejected this dependent claim as obvious over Gerace in view of Harhen in view of Deaton.

The appellants argue that their specification provides a definition of the claim term "null promotion" to mean "a conversion that occurs without the presentation

of a promotion.”” (Appellants’ Brief, p. 15 (quoting Specification, page 6, lines 28-29)). The appellants argue that Gerace “is using the word ‘null’ in the context of performing a regression analysis” and that this concept is “completely different” from “null promotion data” as recited in claim 9. (Appellants’ Reply Brief, p. 5.)

We sustain the examiner’s rejection. As the examiner found, Gerace suggests the use of null data in its method, and we do not see how Gerace’s teaching of the use of null data is “completely different” as urged by appellants. Specifically, in the discussion of the use of regression analysis to refine the weight assigned to various criteria used in the ad campaign, Gerace discloses using “null and alternative hypothesis testing to determine the significance … of criteria and variables.” (Gerace, col. 15, lines 30-33.) We find this to mean that Gerace uses a null hypothesis (i.e., giving no weight to a particular criteria) to see if it affects the overall score of the campaign. As such, the null hypothesis data are indicative of the probability of achieving the business objective (e.g., a certain number of hits or click throughs) by a customer segment while taking a particular criterion out of the analysis.

As such, we hold that a person of ordinary skill in the art at the time of the invention, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to apply the teachings of Harhen and Deaton to the system and method of Gerace to make the combination recited in claim 9.

#### *VIII. Dependent Claim 16*

With respect to dependent claim 16, the examiner determined that “Harhen discloses recognizing inconsistencies, balancing business goals and objectives, and

utilizing hierarchies concerning business goals and objectives.” (Examiner’s Answer, p. 29.) As such, the examiner rejected this dependent claim as obvious over Gerace in view of Harhen in view of Deaton.

The appellants argue that Harhen is not directed to marketing promotion campaigns to customers and thus there is no motivation or suggestion to combine Harhen with Gerace. (Appellants’ Reply Brief, p. 5.) The appellants further argue that Harhen does not teach or suggest engines that determine trade-offs or balance factors in a contradiction of management information. (Appellants’ Reply Brief, p. 5.)

We sustain the examiner’s rejection. We find that Harhen discloses an efficiency frontier engine that recognizes inconsistencies in business objectives and determines a trade-off based on a hierarchy. As found by the examiner on pages 29-30 of the Answer, Harhen teaches that a user can create a model of an enterprise by declaring and instantiating objects and assigning attributes and values to those objects. The method of Harhen provides for a categorization hierarchy of objects. (Harhen, col. 4, line 50 – col. 5, line 5.) This hierarchy allows Harhen to determine trade-offs between the objects when using the business enterprise model to determine its final hypothesis and projection values for strategic decision making. (Harhen, col. 6, lines 44-56.)

As such, we hold that a person of ordinary skill in the art at the time of the invention, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to apply the teachings of Harhen to the system and method Gerace in view of Deaton to make the combination recited in claim 16.

*IX. Dependent Claim 19*

With respect to dependent claim 19, the examiner contends that this claim fails to further limit claim 17 from which it depends because the definition of “contradictions” implies that they are mutually exclusive. (Examiner’s Answer, p. 31.) As such, the examiner rejected this dependent claim as obvious over Gerace in view of Harhen in view of Deaton.

The appellants argue that to one skilled in the art, the terms “mutually exclusive” and “contradiction” have very different meanings. The appellants explain: “Two events or groups are mutually exclusive if they have no events in common. By contrast, two events or groups can have some commonality and some contradictions. These latter events contain contradictions, but are not mutually exclusive.” (Appellants’ Reply Brief, p. 6.)

Even adopting the appellants’ interpretation of this claim limitation, we still find that Harhen teaches discarding reasoning methods and solutions when they conflict with other reasoning methods and solutions, such that the contradictions between the two are mutually exclusive. (Harhen, col. 46, lines 9-56.) For the same reasons given with respect to claim 1, we hold that a person of ordinary skill in the art at the time of the invention, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to apply the teachings of Harhen to the system and method of Gerace in view of Deaton to make the combination recited in claim 19.

## CONCLUSION

To summarize, for the reasons set forth above, we affirm the rejection of claims 1, 2, and 4-20.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

Nancy J. Linck)  
NANCY J. LINCK )  
Administrative Patent Judge )  
 )  
 ) BOARD OF PATENT  
Linda E. Horner) APPEALS  
LINDA E. HORNER ) AND  
Administrative Patent Judge ) INTERFERENCES  
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